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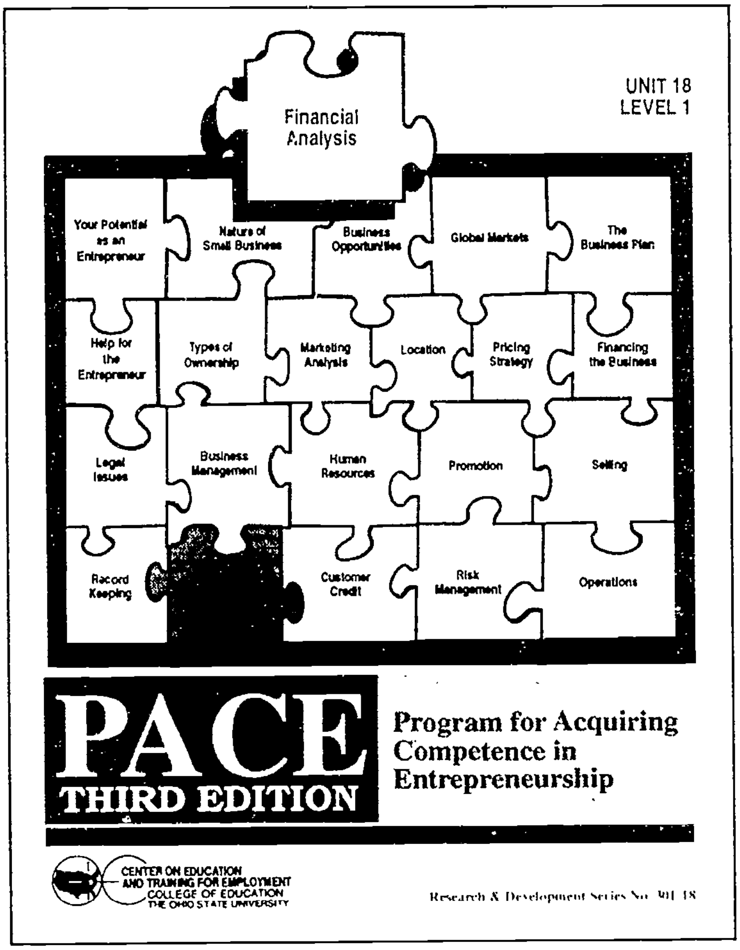
ABSTRACT

This instructor guide for a unit on financial analysis in the PACE (Program for Acquiring Competence in Entrepreneurship) curriculum includes the full text of the student module and lesson plans, instructional suggestions, and other teacher resources. The competencies that are incorporated into this module are at Level 1 of learning--understanding the creation and operation of a business. Included in the instructor's guide are the following: unit objectives, guidelines for using PACE, lists of teaching suggestions for each unit objective/subobjective, model assessment responses, and overview of the three levels of the PACE program. The student module includes the following: specific objectives, questions supporting the objectives, complete content in the form of answers to the questions, case studies, individual activities, group activities, discussion questions, assessment questions, and list of eight references. Model assessment responses are provided in the instructor materials. These four objectives are addressed: discuss the importance of financial management; define accounting terms; describe the tools for financial analysis; and identify ways to analyze one's business finances. (YLB)



INSTRUCTOR GUIDE

Unit 18

Financial Analysis

Level 1

Objectives:

- Discuss the importance of financial management.
- Define accounting terms.
- Describe the tools for financial analysis.
- Identify ways to analyze your business finances.

HOW TO USE PACE

- Use the objectives as a pretest. If a student is able to meet the objectives, ask him or her to read and respond to the assessment questions in the back of the module.
- Duplicate the glossary from the *Resource Guide* to use as a handout.
- Use the teaching outlines provided in the *Instructor Guide* for assistance in focusing your teaching deliv .y. The left side of each outline page lists objectives with the corresponding headings (margin questions) from the unit. Space is provided for you to add your own suggestions. Try to increase student involvement in as many ways as poss ble to foster an interactive learning process.
- When your students are ready to do the *Activities*, assist them in selecting those that you feel would be the most beneficial to their growth in entrepreneurship.
- Assess your students on the unit content when they indicate they are ready. You may choose written or verbal assessments according to the situation. Model responses are provided for each module of each unit. While these are suggested responses, others may be equally valid.

Objectives	Teaching Suggestions
1. DISCUSS THE IMPORTANCE OF FINANCIAL MANAGEMENT	
Why is financial management important?	Use a chart to show reasons why financial management is important to the success of a business. On the chart include monitoring of revenues, costs, cashflow, inventory purchases, etc.
2. DEFINE ACCOUNTING TERMS	
What is a balance sheet?	Define the concept of balance sheet using the idea of "what you owe and what you own." Use an overhead or chalkboard to construct a simplified balance sheet of your school as of the current date. Use this example to help students understand the mechanics of balance sheet.
What are the components of a balance sheet?	Review the balance sheet example constructed previously to point out the fundamental equality underlying the balance sheet (i.e., Assets = Liabilities + Owner's Equity). Redefine the concepts of assets, liabilities, and owner's equity (or net worth) as they apply to the previous balance sheet example. Finally, construct a list with examples of assets, liabilities, and equity to explain the meaning of the balance sheet components; include examples of current assets, fixed assets, long-term liabilities, current liabilities, etc., only after you define these concepts.
What is an income statement?	Define the concept of income statement. Highlight the difference between the income statement and balance sheet. Refer to the examples presented in the unit to help students differentiate between the balance sheet (which is a "snapshot of the business" *as of a specific date)* and the income statement (which is a statement characterizing the profit performance *over a period of time*).
What are the components of an income statement?	Refer to Figure 2 in the text to explain the five major components of the income statement (i.e., total sales, cost of goods sold, gross profit or gross margin, expenses, and net profit or net income). Use simple numerical examples to accustom students to use the formulas for Cost of Goods Sold (i.e., Costs of goods sold = Beginning inventory + Purchases - Ending inventory), Gross Profit (i.e., Gross profit = Sales revenue - Cost of goods sold, and Net profit (i.e., Net profit = Gross Profit - Expenses).
3. DESCRIBE THE TOOLS FOR FINANCIAL ANALYSIS	
Why study the relationship between the various financial statement items?	Explain the concept of ratio analysis. Give examples of ratios that should be computed using information contained in both the balance sheet and income statement (e.g., current ratio, acid test ratio, net profit on sales, etc.). Repeat this procedure to exhaust a'. the ratios presented in the unit.

Objectives	Teaching Suggestions
What are methods for calculating financial statement ratios?	Use an overhead or chalkboard to classify financial statement ratios in (1) liquidity measures, (2) funds management ratios, and (3) profitability measures. Review the examples of ratios computed at the previous step and explain their meaning from a different angle (i.e., explain what these ratios "tell" the entrepreneur about the business's performance). ' is critical to facilitate the students' understanding of the meaning of the ratios rather than persuading them to memorize formulas. Work out as many numerical examples as possible until students feel comfortable with these ratios. Then ask students to work out computations on their own.
4. IDENTIFY WAYS TO ANALYZE YOUR BUSINESS FINANCES What can be learned from reviewing your balance sheet and income statement?	Explain how *common size statements* are developed. Review the balance sheet and income statement presented in the unit and develop a common size statement so students can see the computations. Discuss how industry ratios should be compared with the common size statement results. If a computer spreadsheet software (such as Excel, Lotus, or Quatro Pro) is available, demonstrate how spreadsheets facilitate ratio analysis.
Where can ratio data be obtained?	Make a field trip to the local library and show students how to use published data on financial ratio analysis (e.g., Dun & Bradstreet Key Business Ratios).

MODEL ASSESSMENT RESPONSES

1. The periodical review of balance sheet and income statement will help entrepreneurs assess the performance of their businesses. The information contained in financial statements allows business owners to monitor revenues and expenses, prepare budgets, and control cashflow from operations.

2. The accounting formula underlying the balance sheet states that Assets = Liabilities + Owner's Equity. In simple terms, this formula states that what you owe (liabilities) and what you invested in the business (equity) must equal what the business owns (assets).

3. Four examples of current assets are cash on hand, cash in bank, accounts receivable, and inventory. Fixed assets include buildings, land, machinery, equipment, etc.

4. Three examples of current liabilities are income taxes, the annual portion of a loan, and bills due to creditors. Long-term liabilities include the long-term portion of a debt owed to investors, mortgages, and any other debt which is due beyond 12 months.

5. Five components of the income statement are sales revenue, cost of goods sold, gross margin (or gross profit equal to the difference between sales revenue and cost of goods sold), operating expenses, and net profit (equal to the difference between gross profit and expenses).

6. Cost of goods sold is computed adding the purchases to the beginning inventory and subtracting the ending inventory from the result.

7. Gross margin is defined as the difference between sales revenue and cost of goods sold. Net profit is the difference between gross margin and expenses. Consequently, net profit is placed on the bottom part of the income statement and is smaller than gross profit.

8. ROI = (Net Income)/Equity

   Net Profit on Sales = Net Income/Sales

   Acid Test Ratio = (Cash + Accounts Receivable)/Current Liabilities

   Inventory Turnover = Sales Revenue/Average Inventory
   or Inventory Turnover = Cost of Goods Sold/Average Inventory

   Current Ratio = Current Assets/Current Liabilities

9. Common size statements are prepared using financial statements (balance sheet and income statement). For the balance sheet common sizing, all entries are divided by the total assets. For the income statement common sizing, all entries are divided by total sales.

10. Three sources for locating financial ratio data are the Dun & Bradstreet Key Business Ratios, the Annual Statement Studies published by Robert Morris Associates, and the financial ratio data published by various trade associations.

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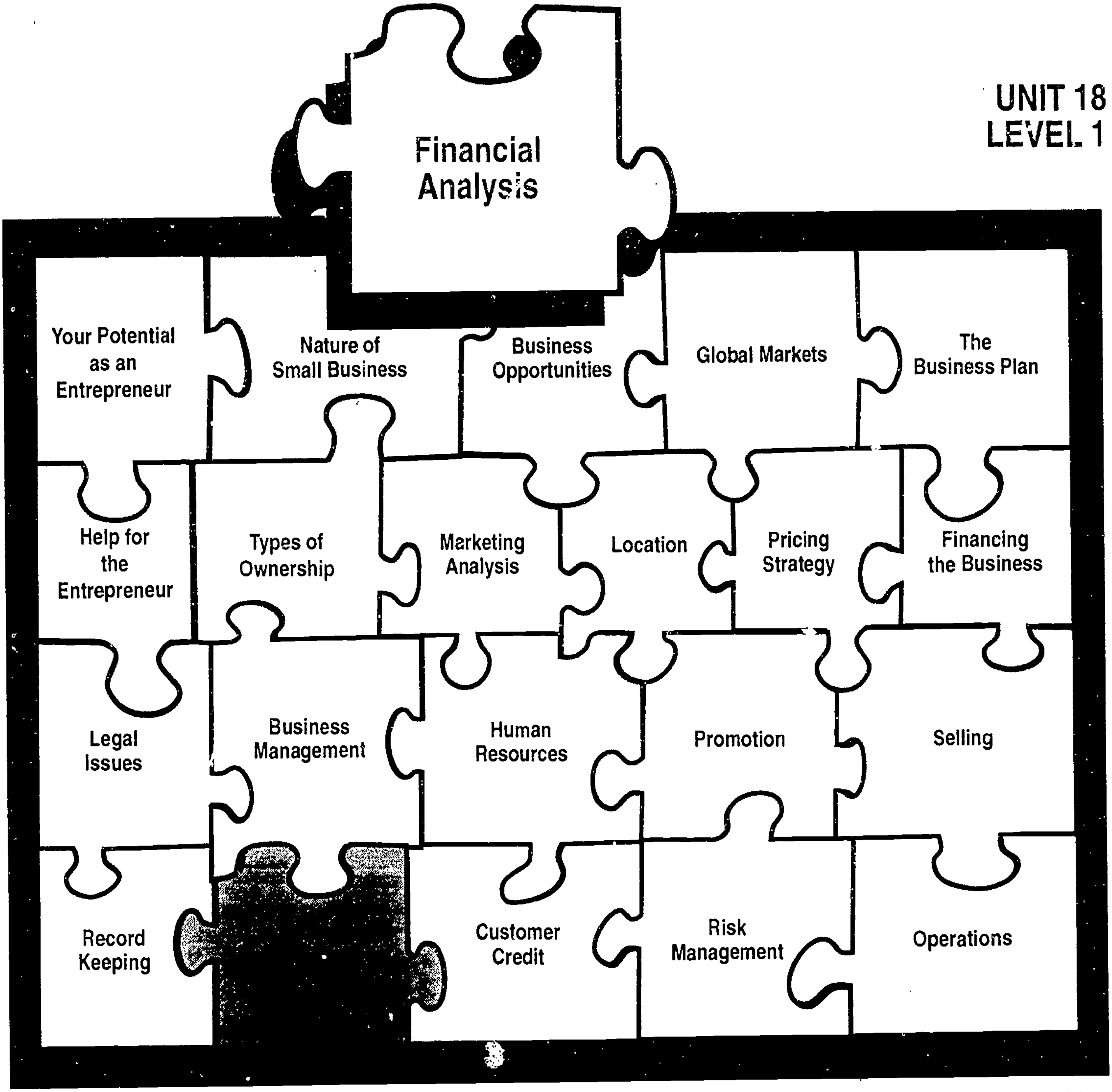
UNIT 18
LEVEL 1



PACE
THIRD EDITION

Program for Acquiring Competence in Entrepreneurship

CENTER ON EDUCATION AND TRAINING FOR EMPLOYMENT
COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY

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FINANCIAL ANALYSIS

BEFORE YOU BEGIN . . .

1. Consult the *Resource Guide* for instructions if this is your first PACE unit.

2. Read What are the Objectives for this Unit on the following page. If you think you can meet these objectives now, consult your instructor.

3. Look for these business terms as you read this unit. If you need help with the meanings, ask your instructor for a copy of the PACE Glossary contained in the *Resource Guide*.

Accounts receivable
Acid-test ratio
Assets
Average sales per day
Balance sheet
Budget
Cash on hand
Common size statements
Computer spreadsheet software
Cost of goods sold
Current assets
Current liabilities
Current ratio
Expenses
Fixed assets
Funds management ratios
Gross income/Gross margin
Gross margin/Gross profit
Income statement
Inventory turnover
Liabilities
Liquidity ratios
Long-term liabilities
Mortgage
Net profit/Net income
Net sales
Net worth/Owner's equity
Profitability ratios
Ratio analysis
Return on investment
Sales revenue

FINANCIAL ANALYSIS

WHAT ARE THE OBJECTIVES FOR THIS UNIT?

Upon completion of this unit you will be able to—

- discuss the importance of financial management,
- define accounting terms,
- describe the tools for financial analysis, and
- identify ways to analyze your business finances.

WHAT IS THIS UNIT ABOUT?

Competent financial management is essential for a business to grow and earn profits. Too often, the small business owner asks an accountant to prepare statements and files them away after merely glancing at them. This attitude toward financial management often indicates a lack of knowledge about the value of financial statements.

This unit provides information about both income statements and balance sheets. The unit also shows how these statements are related to one another and how to use ratio analysis to interpret the information they provide. The study of the amount of advertising dollars a business spends in relation to sales would be one example of a ratio analysis. The future of the business depends on the owner's ability to handle financial management. Financial management tasks include—

- reading and analyzing financial statements,
- determining the financial strengths and weaknesses of the firm, and
- planning and taking necessary corrective action.

WHY IS FINANCIAL MANAGEMENT IMPORTANT?

Understanding how your business functions through its finances allows you to monitor and control the revenues and expenses of your firm. In addition, financial management assists you in preparing budgets which leads to control of your cash flow.

When you are managing your finances, you are able to determine the time to expand or cut back on business activities, purchase new equipment and inventory, and hire new employees. You will also be able to determine when you may need additional dollars to invested into your business.

WHAT IS A BALANCE SHEET?

A *balance sheet* is a statement that tells what you *own* and what you *owe* at any one time. It is like a photograph of your business in one day. Most likely, balance sheets prepared for 3 days in a row will have different figures. Financial information about a business—or about you—changes every day. You receive income periodically and you pay bills periodically. In effect, you manage a cash flow and the result is the financial condition of your business. The balance sheet is used to control the financial condition of the business.

If your cash is always in motion, why is the balance sheet so important? The balance sheet helps you control this cash flow. This control enables you to manage both your financial resources (what you own) and your debts (what you owe) effectively.

WHAT ARE THE COMPONENTS OF A BALANCE SHEET?

The balance sheet has three main parts or components. These are (1) *assets*, (2) *liabilities*, and (3) *net worth* (also called equity).

All balance sheets are based on the following formula (also known as the accounting formula):

Assets = Liabilities + Net Worth

The above formula states that *assets* must equal *liabilities* plus *net worth*. In other words, the total of all those items on balance sheet listed under assets must exactly equal the total listed under liabilities plus net worth.

Assets are anything that the business owns, including cash on hand, equipment, real estate, and inventory. *Current assets* include cash on had or in the bank, and anything that can be changed into cash within 12 months, *accounts receivable* (what people owe you), and inventory.

Fixed assets are those items that usually cannot be changed into cash within 12 months. They are items that the business acquired for long-term use. Fixed assets include land, buildings, machinery, equipment, and company vehicles.

Liabilities are anything that the business owes. Liabilities might include loans, credit notes, income taxes, and mortgages. A *current liability* is anything you owe that can be paid by using a current asset. *Current* *liabilities* are usually due within 12 months. Current liabilities include income taxes, loans, and bills due to creditors. A *long-term liability* includes any debts that will not be paid within 12 months. A *mortgage* is an example of a long-term liability.

Net worth is the owned portion of the business. It is the owner's investment in a single proprietorship, the partners' investment in a partnership, or the stockholders investment in a corporation.

An example of a balance sheet for "Bill's Craft Shop" is shown in Figure 1.

WHAT IS AN INCOME STATEMENT?

The income statement, often called *profit and loss statement*, measures the results (i.e., profit or lost) of the activities of the business during a period of time. Income statements are usually developed at the end of an accounting period; that is, at the end of the month or at the end of the fiscal year. The income statement is used by the business owner to evaluate the profit performance of the business.

BILL'S CRAFT SHOP
Balance Sheet
December 31, 19__

Assets		
Current Assets		
Cash		$13,000
Accounts Receivable	$7,000	
Less allowance for doubtful accounts	$,000	$6,000
Inventory	$9,000	
Less allowance for inventory loss	$1,000	$8,000
Total Current Assets		$27,000
Fixed Assets		
Land		$7,000
Building	$40,000	
Less allowance for depreciation	$4,000	$36,000
Equipment	$10,000	
Less allowance for depreciation	$1,000	$9,000
Total Fixed Assets		$52,000
TOTAL ASSETS		$79,000

Liability and Net Worth (Equity)	
Current Liabilities	
Accounts Payable	$9,000
Notes Payable	$2,000
Total Current Liabilities	$11,000
Long-Term Liabilities Mortgage	$30,000
Total Long-Term Liabilities	$30,000
TOTAL LIABILITIES	$41,000
Equity (**Net Worth**) (Owner's equity)	$38,000
TOTAL LIABILITIES AND EQUITY (NET WORTH)	$79,000

Figure 1. Balance sheet

WHAT ARE THE COMPONENTS OF AN INCOME STATEMENT?

Income statements have the following five components:

- Total sales
- Cost of goods sold
- Gross profit (or gross margin)
- Expenses
- Net profit (or net income)

Each of these components provides important financial data about a firm. The discussion below refers to the income statement presented in Figure 2.

Total sales includes both cash and credit sales ($80,000). It does not include sales tax collected or the sales figures for products returned.

The **cost of goods sold** is the amount that it costs you to buy or produce the goods that you sold ($60,000). If you are a manufacturer, you will also inventory raw materials and products in process and include this information along with direct labor and factory overhead. A supporting document called a "Statement of Cost of Goods Manufactured" would also be prepared for a manufacturing firm. The cost of goods sold is calculated by—

- taking a beginning inventory ($18,000),
- adding materials or products purchased during the accounting period ($50,000), and
- subtracting inventory remaining at the end of the accounting period ($8,000).

The formula is:
Beginning inventory
\+ Purchases
\- Ending inventory
= Cost of Goods Sold

Gross margin is the amount of profit made from sales before operating expenses are deducted ($20,000). *Gross margin* is calculated by subtracting the cost of goods sold ($60,000) from the total sales ($80,000).

Expenses ($16,000) include all costs involved in running the business.

Net profit ($4,000) is the profit or loss at the end of the accounting period. This does not include taxes to be paid on the business. An example of an "Income Statement" for "Bill's Craft Shop" is illustrated in Figure 2.

WHY STUDY THE RELATIONSHIPS BETWEEN THE VARIOUS FINANCIAL STATEMENT ITEMS?

Ratio analysis is a means of analyzing the figures that appear on financial statements. This analysis enables the manager to make

BILL'S CRAFT SHOP
Income Statement
For Period Ending December 31, 19__

	Total Sales		
1. Cash sales	$32,000		
Credit sales	48,000		$80,000
Total Sales			
2. Cost of goods sold			
Beginning inventory	$18,000		
Purchases	50,000		
Cost of goods available for sale		$68,000	
Less ending inventory		8,000	
Cost of Goods Sold		$60,000	$60,000
3. **Gross Margin**			$20,000
4. Expenses			
Salaries and wages	$10,000		
Utilities	1,000		
Advertising	1,500		
Depreciation on equipment	3,500		
Total Expenses			$16,000
Net Profit before Taxes			4,000
Estimated Income Tax			1,100
5. **NET PROFIT**			$2,900

Figure 2. Income statement

several critical performance comparisons. You will compare the firm's performance with itself at different times (trend analysis) and against other firms or selected portions of your industry. Such comparisons are essential to future planning as they reveal the strengths and weaknesses of the business operation and therefore areas that need either emphasis or corrective action. A *ratio* is computed by taking two selected figures from the financial statements and expressing one figure with respect to the other.

The items on the income statement and the balance sheets are related to one another in several basic ways. An understanding of these relationships is critical to learning how to use ratio analysis in managing your business (see Figure 3). Compare the data presented in Figures 1 and 2 with that shown in Figure 3.

In level 2 of this unit, you will also learn about how cashflow statements are related to balance sheets and income statements.

WHAT ARE METHODS FOR CALCULATING FINANCIAL STATEMENT RATIOS?

Ratios are used to—

A. evaluate the ability of the business to pay its bills on time (debt-paying abil-

Income Statement	Balance Sheet
Sales	Any non-cash sales figure becomes an Accounts Receivable asset on the balance sheet.
Cost of Goods Sold	A portion of the cost of Goods Sold item contributes to the asset item for inventory and to the accounts payable item for liabilities.
Operating Expenses	Expenses contribute to the accounts payable liability.
Depreciation	Contributes to the accumulated depreciation reduction in your assets.
Income Taxes	A portion of your income tax expense may become a current liability under income taxes payable.
Net Income	Contributes to the owners equity item.

Figure 3. List of items on income statement and balance sheet

ity). These are also called *liquidity measures*. They indicate how fast the business can convert specific assets into cash.

B. evaluate how the business investments in inventory, accounts receivable, and fixed assets are managed. These ratios are called *funds management ratios*.

C. evaluate the ability of the business to provide a return on the investment of the owner. These ratios are also called *profitability measures*.

The following ratios compare figures from the profit and loss statement and the balance sheet for "Bill's Craft Shop." As you work through each of these ratios, however, remember that today many small business owners use computers to help them manage finances. A section on computers in business is included at the end of this unit. When reading this section, think of ways the computer could be used to help calculate financial ratios for "Bill's Craft Shop," or for your own small business.

A. **Liquidity Measures (Debt-Paying Ability)**

- **Current ratio**. The current ratio shows whether the business has enough current assets to meet its current debts. Compute the current ratio from the **balance sheet** by dividing **current assets** by **current liabilities**. A current ratio of 2 to 1 is generally considered good.

$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	= Current Ratio
$\frac{\$27,000}{\$11,000}$	= 2.5 to 1

Figure 4. Current ratio

- **Acid-test ratio (or *Quick Ratio*)**. This ratio shows whether the business could meet its current obligations with funds readily available if all sales revenue should stop. It is computed by dividing cash plus accounts receivable by **current liabilities**. An acid-test ratio of 1 to 1 is considered satisfactory.

Cash + Accounts Receivable / Current Liabilities	= Acid-Test Ratio
\$13,000 + \$6,000 / \$11,000	= 1.7 to 1

Figure 5. Acid-Test Ratio (or Quick Ratio)

B. Funds Management Measures

- **Inventory turnover**. The inventory turnover figure shows how rapidly the merchandise is being sold. It is also a measure of the liquidity of your inventory. It shows whether the business has too much or too little money tied up in inventory in relation to other businesses of similar type or compared to your own past performance. Compute this from the income statement by dividing total revenue for a certain period by average inventory. Determine the average inventory by computing the average of the beginning and ending inventory. In the case of "Bill's Craft Shop," compute the inventory turnover by dividing \$18,000 + \$8,000 by 2 or \$13,000.

  Usually, the higher the turnover rate, the better. Turnover rates vary depending upon the type of business and its merchandise. This rate of 6.1 would suggest that the merchandise in the inventory is current and salable. A low rate, say 1, would suggest that all the revenue is tied up in inventory that isn't being sold quickly.

Total Revenue / Average Inventory	= Inventory Turnover
\$80,000 / (\$18,000 + \$8,000)/2	= 6.1 times

Figure 6. Inventory turnover

Note that **inventory turnover** is sometimes calculated as **cost of goods** sold divided by average inventory.

Cost of Goods Sold / Average Inventory	= Inventory Turnover
\$60,000 / (\$18,000 + \$8,000)/2	= 4.6 times

Figure 7. Inventory turnover

- **Average collection period.** The average collection period indicates how quickly the credit sales are being collected. It will tell the owner how many days' sales are tied up in accounts receivable. It is computed from the balance sheet and the income statement. First divide credit sales by 365 (number of days in the year) to find the *average sales per day.* Then, divide the accounts receivable figure by the average sales per day.

Credit Sales / 365	= Average Sales per Day
\$48,000 / 365	= \$131.5 per day

Figure 8. Average sales per day

The average collection period should not be more than one and one-half times the credit terms extended by the business

(30, 60, 90 days, and so on). In this case, assume that "Bill's Craft Shop" offers 30-day credit. Customers must pay their bills within thirty days.

Accounts Receivable / Average Sales per Day	=	Inventory Collection Period
$7,000 / $131.5 per day	=	53.2 days

Figure 9. Average collection period

The average collection period of 53 days shows that his customers are taking somewhat longer to pay than the 45 day standard for his credit period. This also indicates that his Accounts receivable asset are not as easily converted into cash (liquid) as they might be.

C. Profitability Ratios

- **Return on investment.** This ratio shows the return obtained on the owner's investment in the business. It is computed by dividing the *net profit* figure by owner's equity figure and express the result as a percentage.

Net Income / Equity	=	Return on Investment
$ 2,900 / $38,000	=	7.63%

Figure 10. Return on investment

This figure should be a great deal larger than the return the owner could get by investing the money elsewhere. Business owners or investors should receive a better return on their investment because of the time, effort, and risks involved in owning, operating, and/or investing in a business.

- **Net profit to sales.** This ratio shows the net profit margin on sales. Compute by dividing the net profit figure by the sales figure.

  A reduced net profit on sales can be caused by (1) poor pricing policies, (2) high operating costs, or (3) a combination of both factors. To determine which of these factors is causing a low net profit, the business owner should look at further ratio data.

- **Asset turnover ratio.** This figure is expressed as the number of times sales is to the total value of the businesses assets. The higher the level of sales for given asset mix, the more profitable the firm will be. A firm's net profit on sales may be high, but if the rate of asset turnover is low, this may indicate a low rate of *return on investment.* The value of annual sales should be greater than the amount of investment in assets. This table is computed by dividing sales by total assets.

Net Sales / Average Total Assets	=	Asset Turnover
$80,000 / $79,000	=	1.01

Figure 11. Asset turnover ratio

Bill should evaluate the trends in this ratio with respect to his past performance and industry trends for companies his size. He could stand to improve the way he is utilizing his assets.

WHAT ELSE CAN BE LEARNED FROM REVIEWING YOUR BALANCE SHEET AND INCOME STATEMENT?

Another important tool for business managers is to convert the financial statement into *common size statements*. This is done by dividing every entry on the balance sheet by total assets and expressing the result as a *percentage*. A similar process is performed on the income statement by dividing each entry by total sales. These percentages are then listed as an additional column on their respective financial statement and compared to industry norms or with your own past performance.

For example, Bill would find that his expenses represent 20 percent of his sales for a given period. If he also notes that his expense percentage has climbed suddenly from 10 percent during the past year, he will begin to look for several potential causes of the jump in order to improve his controls. Note that several of the ratios described above could be drawn directly from the common size statement. You can have your accountant prepare statements in this format to facilitate these comparisons or you can produce them yourself either manually or automatically via a computer spreadsheet.

WHERE CAN RATIO DATA BE OBTAINED?

Following are sources of ratio data for comparing the performance of a business with the average performance of similar businesses. These sources may be reviewed in your local public library.

- *Key Business Ratios.* Published annually by Dun and Bradstreet, Inc., 99 Church Street, New York, New York 10007. Attention: Public Relations Department. Covers 125 lines of retailing, wholesaling, manufacturing, and construction industries.

- *Almanac of Business and Industrial Financial Ratios.* Published by Prentice Hall, Engelwood Cliffs, New Jersey 07632.

- *Mail-Me-Monday Barometer of Small Business.* Published semiannually by the Accounting Corporation of America, 1929 First Avenue, San Diego, California 92101.

- *Annual Statement Studies.* Published annually by Robert Morris Associates, One Liberty Place, Philadelphia, Pennsylvania 19103.

- Various trade associations publish ratio data which is useful to different types of businesses. (See the *PACE Resource Guide.*)

  For additional information on business ratios, consult Levels 2 and 3 of this PACE Unit.

ACTIVITIES

The following activities are designed to help you apply what you have learned in this unit.

INDIVIDUAL ACTIVITY

A.

Review the balance sheet and income statement presented in this unit. Try to compute all financial ratios you have learned about in this unit. Check your computations against the results displayed in the text.

B.

In your own words, explain the meaning of the financial ratios computed in Activity A. Relate your explanations to a business you are familiar with (e.g., a gas station, a grocery store, an auto repair shop, etc.).

GROUP ACTIVITY

A.

In teams of four or six, arrange an appointment with at least two small business owners in your community. Ask them what financial statements they use and why. Find out if they prepare their own statements or use an accountant. Ask them for examples of how they use information from these statements. Find out if they use computerized information records and reporting systems. Ask if they are using a computer service or have their own computer. If they are using their own computer, find out what kind of hardware they have. Ask what software they have found to be most effective. If possible, get copies of blank forms or records. Prepare an oral and written report of your interviews for presentation to the entire group.

B.

Work in teams of four to six. Refer to the common size statements of Billy's Craft Shop presented in this unit. Consult your local library to gather data on financial ratios in the industry. Ask your librarian to help you decide what industry you should select. Provide the librarian with some background information on what kind of business Billy's Craft Shop is in.

CASE STUDY

Ann Jenkins, the owner of the "Lawn and Garden Shop," has just received her end-of-the-year balance sheet and income statement from her accountant. These financial statements may be found on the following pages. Ann has never used ratio analysis before, she has decided that this year she would compare her business's performance with the lawn and garden industry averages.

From her trade association she has obtained ratio data showing the industry average for each of the following ratios:

- **Return on Investment Industry Average**

  $\frac{\text{Net profit}}{\text{Equity}}$ = 14.9%

- **Net Profit to Sales**

  $\frac{\text{Net profit}}{\text{Sales}}$ = 5.0%

- **Asset Turnover**

  $\frac{\text{Sales}}{\text{Assets}}$ = 2 to 1

- **Inventory Turnover**

  $\frac{\text{Total revenue}}{\text{Average inventory}}$ = 9.7 times

- **Average Collection Period** = 45 days

- **Current Ratio**

  $\frac{\text{Current assets}}{\text{Current liabilities}}$ = 2.2

DISCUSSION QUESTIONS

1. Help Ann compute financial ratios for the "Lawn and Garden Shop." Compare the business performance with the industry averages.

2. Help Ann determine the strengths and weaknesses of the "Lawn and Garden Shop" based on the ratios calculated.

THE LAWN AND GARDEN SHOP
BALANCE SHEET
December 31, 199__

Assets			
Current Assets			
Cash			
Accounts Receivable	$4,000	$1,000	
Less allowance for doubtful accounts	400	$3,600	
Inventory		$3,000	
Total Current Assets			$7,600
Fixed Assets			
Land		$5,000	
Building	$30,000		
Less allowance for depreciation	$5,000	$25,000	
Equipment	$6,000		
Less allowance for depreciation	$1,000	$5,000	
Total Fixed Assets			$35,000
TOTAL ASSETS			$42,600
Liabilities and Equity			
Current Liabilities			
Accounts Payable		$3,000	
Notes Payable		500	
Total Current Liabilities			$3,500
Long-term Liabilities			
Mortgage		$16,100	
Total Long-term Liabilities			$16,100
TOTAL LIABILITIES			$19,600
Equity (Net Worth)			
Owners equity			$23,000
TOTAL LIABILITIES AND EQUITY			$42,600

THE LAWN AND GARDEN SHOP
PROFIT AND LOSS STATEMENT
FOR PERIOD ENDING DECEMBER 31, 199___

Total Sales			
Cash Sales		$15,000	
Credit Sales		20,000	
Total Sales			$35,000
Cost of Goods Sold			
Beginning Inventory	$4,000		
Purchases	$25,000		
Cost of goods available for sale		$29,000	
Less ending inventory		3,000	
Cost of Goods Sold			$26,000
Gross Margin			$9,0000
Expenses			
Salaries and wages		$3,500	
Utilities		700	
Advertising		600	
Depreciation on equipment		200	
Total Expenses			$5,000
Net Profit Before Taxes			4,000
Estimated Income Tax			1,100
NET PROFIT			2,900

RATIO WORKSHEET	Industry Average	Lawn & Garden	Comments
Return on investment	14.9%	--------	--------
Net Profit to sales	5.0%	--------	--------
Sales to Equity	3.4%	--------	--------
Inventory Turnover	9.7%	--------	--------
Average Collection Period	45	--------	--------
Current Ratio	2.2%	--------	--------

ASSESSMENT

Read the following questions to check your knowledge of the topics presented in this unit. When you feel prepared, ask your instructor to assess your competency on them.

1. Why should a business owner review balance sheets and income statements periodically?

2. Explain the accounting formula that underlies the three portions of any balance sheet.

3. Identify three examples of current assets and three examples of fixed assets.

4. Give three examples of current liabilities and three examples of long-term liabilities.

5. List five major components of a profit and loss statement.

6. Illustrate how to calculate the cost of goods sold for a retail business.

7. Explain how gross margin differs from the net profit of a business.

8. Give the formula for calculating each of the following financial ratios.

   a. Return on investment
   b. Net profit on sales
   c. Acid ratio
   d. Inventory turnover
   e. Current ratio

9. Describe how to prepare common size statements.

10. List three sources for locating financial ratio data.

REFERENCES

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PACE

Units on the above entrepreneurship topics are available at the following levels:

* Level 1 helps you understand the creation and operation of a business
* Level 2 prepares you to plan for a business in your future
* Level 3 guides you in starting and managing your own business